Remarks

Claims 1 and 8 have been amended to distinctly claim the present invention by providing definitions for templates and delta information within the independent claims. Support for these amendments can be found in paragraphs [0017] and [0021] of the specification. In addition, the claims now clarify that the response message includes a hint embedded with the delta information. Support for these amendments can be found in paragraph [0048] of the specification. Claim 2-7, 9-13, 19, and 20 remain unchanged. No further claims have been cancelled or added. Claims 1-13, 19 and 20 remain pending in the application.

Examiner Interview Request

The Applicant requests an interview with the Examiner prior to issuance of a future office action on the present application. The Applicant believes such an interview may help to clarify any misunderstandings regarding the definitions of the various claim terms and how they distinguish the present invention over the prior art cited by the Examiner.

35 U.S.C. §102

Claims 1 and 8 were rejected under 35 U.S.C. 102(e) as being anticipated by Malkin, et al. (U.S. Patent No. 6,085,193). The Examiner stated that the definition of delta information need not include all of the language recited by the Applicant in the specification. The Applicant respectfully disagrees; however, to clarify that this definition is what is being referred to in the claims, the Applicant has amended the independent claims to include the entire definition of "delta information" as well as the definition of a "template". With these additional definitions in the claims, the Applicant believes the present independent claims are distinguishable over Malkin as being drawn to a method of predictive caching and a predictive caching device that also uses delta information in a delta encoding environment. In constrast, Malkin merely describes a predictive caching system. Malkin does not even mention a system that may be used in a delta encoding environment.

Furthermore, the particular predictive caching algorithm claimed in claims 1 and 8 creates predictions based on information about the request and a referring page that indicates an object just previously requested by the client. While Malkin does describe statistics tables and generating prefetch hints based on behavior of clients. Malkin fails to specifically teach the use of information about the current request or a referring page to the current request in generating hints or predictions. In short, Malkin does not teach predictive caching with delta encoding and does not teach creating predictions page as specified in independent claims 1 and 8.

Claims 2-7 depend from claim 1 and therefore are allowable over Malkin for the same reasons that claim 1 is allowable. Claims 9-13, 19, and 20 depend from claim 8 and therefore are allowable over Malkin for the same reasons that claim 8 is allowable.

Claims 1 and 8 were rejected under 35 U.S.C. 102(e) as being anticipated by Becker, et al. (U.S. Patent No. 5,878,223). Like Malkin, Becker generally describes a predictive caching system. Similarly, like Malkin, Becker fails to disclose the use of delta information in any form of delta encoding.

In addition, the particular predictive caching algorithm claimed in claims 1 and 8 creates predictions or hints based on information about the request and a referring page that indicates an object just previously requested by the client. While Becker describes the use of information about the request in generating hints or predictions, Becker does not teach the use of information about a referring page in generating those hints or predictions. Becker describes a simple 2 dimensional matrix with a pages and next pages. Becker selects the next page based only on knowing the presently requested page and the probability of requesting the next page. In contrast, the present invention as claimed uses an additional factor of the referring page in making a prediction or hint for the next page.

In short, Becker does not teach predictive caching with delta encoding and does not teach creating predictions as specified in independent claims 1 and 8.

Claims 2-7 depend from claim 1 and therefore are allowable over Becker for the same reasons that claim 1 is allowable. Claims 9-13, 19, and 20 depend from claim 8 and therefore are allowable over Becker for the same reasons that claim 8 is allowable.

Therefore, under 35 U.S.C. 102(e), neither Malkin nor Becker teach the present invention as claimed in claims 1 and 8 and withdrawal of this rejection is respectfully requested.

35 U.S.C. §103

Claims 1-13, and 19-20 were rejected under 35 USC §103(a) as being unpatentable over Mogul (U.S. Patent No. 5,802,292) in view of Mogul (HTTP Delta Clusters and Templates, Publication date: 24 August 2000). Applicant respectfully suggests that any motivation to combine Mogul '292 with Mogul is not found in either reference. But for the hindsight gained in reviewing the present patent application specification, no such combination would have been contemplated by one of ordinary skill in the art. The gist of the present invention, as claimed, involves a novel combination of web page retrieval latency reduction techniques. The novel combination is to use both predictive caching and delta encoding in a single system. Prior to the present inventors, no other person of ordinary skill in the art has suggested combining these two techniques into a single system or method of reducing latency in web page retrieval. As such, the use of hindsight based on the present patent application is simply not permissible. The Applicant submits that the rejection based on a combination of Mogul '292 with Mogul is not proper and should be withdrawn.

In addition, even if the teachings of Mogul '292 are combined with Mogul, the references when considered individually or together in combination, fail to suggest or teach all of the elements of the presently pending independent claims 1 and 8. For example, neither Mogul '292 nor Mogul teach creating predictions based on (1) information about the request and (2) a referring page that indicates an object just previously requested by the client, as specified in independent claims 1 and 8. More precisely, Mogul '292 does not, as the Examiner has previously suggested, teach creating predictions based on criteria that includes an object just previously requested by the client. Applicant has

reviewed column 4, lines 30-40 as suggested by the Examiner, but still fails to find any teachings in Mogul '292 of using referring pages in predicting next objects requested.

Furthermore, neither Mogul '292 nor Mogul disclose sending a client both (1) a hint for the next object to download and (2) delta information for the requested object, as specified in independent claims 1 and 8. Please note that delta information is defined in independent claims 1 and 8 as well as the present patent application as a selected portion of a web page that may vary between instances of the web page as was previously noted in these remarks. In other words, delta information is not merely calculation information, but rather includes a web object that forms a portion of a web page. Furthermore, Mogul '292 at column 3, lines 50-57 teaches away from the present invention as claimed by stating that the server system 14 "transmits these predictions, not the actual objects, to the client system 10. This is typically done following a transmission of the most recently requested object or objects, so that the retrieval latency for that object or objects is not increased." In other words, the predictions or hints are not sent by Mogul '292 in the response as now presently claimed in the independent claims. Neither Mogul '292 nor Mogul disclose sending this delta information about a web page along with a hint.

Claims 2-7 depend from claim 1 and therefore are allowable over Mogul '292 and Mogul for the same reasons that claim 1 is allowable. Claims 9-13, 19, and 20 depend from claim 8 and therefore are allowable over Mogul '292 and Mogul for the same reasons that claim 8 is allowable.

Therefore, under 35 USC §103(a), Mogul '292 and Mogul fail to teach the present invention as claimed in claims 1-3, 19, and 20 and withdrawal of this rejection is respectfully requested.

The Applicant has reviewed the other references cited the by Examiner and determined that they do not teach or suggest the present invention as claimed.

Conclusion

On the basis of the foregoing, Applicant respectfully submits that claims 1-13, 19, and 20 are now believed to be in condition for allowance. Applicant respectfully requests that a timely Notice of Allowance be issued in this case.

Respectfully submitted,

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